

Soils Report

Drainage Class - Dominant Condition

Drainage class (natural) refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized -- excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Soil Survey: Island of Hawaii, Hawaii

Survey Status: Out-of-date

Correlation Date: 01/01/1968

Distribution Date: 11/21/2001

Map Symbol	Soil Name	Rating
AaC	AINAKEA SILTY CLAY LOAM, 3 TO 12 PERCENT SLOPES	Well drained
AaD	AINAKEA SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
AaE	AINAKEA SILTY CLAY LOAM, 20 TO 35 SLOPES	Well drained
AFD	APAKUIE VERY FINE SANDY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
AkC	AKAKA SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Well drained
AkD	AKAKA SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Well drained
AIC	ALAPAI SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Well drained
AID	ALAPAI SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Well drained
AIE	ALAPAI SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Well drained
ApD	ALAPAI EXTREMELY STONY SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Well drained
ASD	APAKUIE VERY STONY VERY FINE SANDY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
BH	BEACHES	Excessively drained
FL	FILL LAND	Well drained
HaA	HAWI SILTY CLAY, 0 TO 3 PERCENT SLOPES	Well drained
HaC	HAWI SILTY CLAY, 3 TO 12 PERCENT SLOPES	Well drained
HCD	HANIPOE VERY STONY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
HDD	HANIPOE SILT LOAM, 12 TO 20 PERCENT SLOPES	Well drained
HeC	HAWI EXTREMELY STONY SILTY CLAY, 6 TO 12 PERCENT SLOPES	Well drained
HFD	HANIPOE VERY ROCKY SILT LOAM, 6 TO 20 PERCENT SLOPES	Well drained
HHC	HEAKE VERY ROCKY SANDY LOAM, 6 TO 12 PERCENT SLOPES	Well drained
HKC	HEAKE EXTREMELY ROCKY SANDY LOAM, 0 TO 10 PERCENT SLOPES	Well drained
HIC	HILEA SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Well drained
HND	HONAUNAU SILT LOAM, 6 TO 20 PERCENT SLOPES	Moderately well drained
HoC	HILO SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Well drained
HoD	HILO SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Well drained
HoE	HILO SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Well drained
HRD	HONAUNAU EXTREMELY ROCKY SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Moderately well drained
HsC	HONOKAA SILTY CLAY LOAM, LOW ELEVATION, 0 TO 10 PERCENT SLOPES	Well drained

Map Symbol	Soil Name	Rating
HsD	HONOKAA SILTY CLAY LOAM, LOW ELEVATION, 10 TO 20 PERCENT SLOPES	Well drained
HsE	HONOKAA SILTY CLAY LOAM, LOW ELEVATION, 20 TO 35 PERCENT SLOPES	Well drained
HTD	HONOKAA SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Well drained
HTE	HONOKAA SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Well drained
HUD	HONUAAULU VERY STONY SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Well drained
HVD	HONUAAULU EXTREMELY STONY SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPE	Well drained
KaC	KAIWIKI SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Well drained
KaD	KAIWIKI SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Well drained
KaE	KAIWIKI SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Well drained
KBC	KAALUALU EXTREMELY STONY LOAMY SAND, 2 TO 12 PERCENT SLOPES	Well drained
KCD	KAHUA SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Somewhat poorly drained
KDD	KAINALIU VERY STONY SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
KEC	KAINALIU EXTREMELY STONY SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
KfA	KIKONI VERY FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES	Well drained
KGC	KAMAKOA VERY FINE SANDY LOAM, 0 TO 10 PERCENT SLOPES	Somewhat excessively drained
KhA	KOHALA SILTY CLAY, 0 TO 3 PERCENT SLOPES	Well drained
KhC	KOHALA SILTY CLAY, 3 TO 12 PERCENT SLOPES	Well drained
KhD	KOHALA SILTY CLAY, 12 TO 20 PERCENT SLOPES	Well drained
KhE	KOHALA SILTY CLAY, 20 TO 35 PERCENT SLOPES	Well drained
KIC	KAMAOA LOAM, 6 TO 12 PERCENT SLOPES	Well drained
KJC	KAMAOA LOAM, MODERATELY SHALLOW, 6 TO 12 PERCENT SLOPES	Well drained
KKC	KAMAOA EXTREMELY STONY LOAM, 6 TO 12 PERCENT SLOPES	Well drained
KLC	KAPAPALA LOAM, 0 TO 10 PERCENT SLOPES	Well drained
KLD	KAPAPALA LOAM, 10 TO 20 PERCENT SLOPES	Well drained
KMD	KAPAPALA VERY ROCKY LOAM, 6 TO 20 PERCENT SLOPES	Well drained
KNC	KAWAIHAE EXTREMELY STONY VERY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES	Somewhat excessively drained
KOC	KAWAIHAE VERY ROCKY VERY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES	Somewhat excessively drained
KPD	KEALAKEKUA SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
KRD	KEALAKEKUA VERY STONY SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Well drained
KSD	KEALAKEKUA EXTREMELY STONY SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
KTB	KEEKEE LOAMY SAND, 0 TO 6 PERCENT SLOPES	Somewhat excessively drained
KuC	KUKAIAU SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Well drained
KuD	KUKAIAU SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
KuE	KUKAIAU SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Well drained

Map Symbol	Soil Name	Rating
KVC	KEHENA SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Somewhat poorly drained
KwD	KUKAIAU SILTY CLAY LOAM, MODERATELY SHALLOW, 12 TO 20 PERCENT SLOPES	Well drained
KXC	KIKONI VERY FINE SANDY LOAM, 3 TO 12 PERCENT SLOPES	Well drained
KYC	KIKONI EXTREMELY STONY VERY FINE SANDY LOAM, 6 TO 12% SLOPES	Well drained
KZD	KILOHANA LOAMY FINE SAND, 12 TO 20 PERCENT SLOPES	Somewhat excessively drained
LAD	LAUMAIA SILT LOAM, 6 TO 20 PERCENT SLOPES	Well drained
LUC	LAUMAIA EXTREMELY STONY SILT LOAM, 6 TO 12 PERCENT SLOPES	Well drained
MaA	MAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	Well drained
MHC	MAHUKONA SILTY CLAY LOAM, 3 TO 12 PERCENT SLOPES	Well drained
MKC	MAHUKONA VERY STONY SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Well drained
MLD	MAILE SILT LOAM, 6 TO 20 PERCENT SLOPES	Well drained
MMD	MANAHAA SILT LOAM, 6 TO 20 PERCENT SLOPES	Well drained
MND	MANAHAA EXTREMELY STONY SILT LOAM, 6 TO 20 PERCENT SLOPES	Well drained
MoC	MOAULA SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Well drained
MoD	MOAULA SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Well drained
MoE	MOAULA SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Well drained
MT	MIXED ALLUVIAL LAND	Well drained
NaC	NAALEHU SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Well drained
NaD	NAALEHU SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Well drained
NaE	NAALEHU SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Well drained
NhD	NAALEHU VERY ROCKY SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Well drained
NIC	NIULII SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Well drained
NID	NIULII SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
NIE	NIULII SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Well drained
OaC	OLAA SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Well drained
OHC	OHIA SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Well drained
OID	OLAA EXTREMELY STONY SILTY CLAY LOAM, 0 TO 20 PERCENT SLOPES	Well drained
OoC	OOKALA SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Well drained
OoD	OOKALA SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
OoE	OOKALA SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Well drained
OSD	OHIA EXTREMELY STONY SILTY CLAY LOAM, 0 TO 20 PERCENT SLOPES	Well drained
PaC	PAAUHAU SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Well drained
PaD	PAAUHAU SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Well drained
PaE	PAAUHAU SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Well drained
PeC	PANAEWA VERY ROCKY SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Moderately well drained
PKB	PAKINI VERY FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES	Well drained
PLC	PALAPALAI SILT LOAM, 6 TO 12 PERCENT SLOPES	Well drained
PMC	PALAPALAI SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Well drained

Map Symbol	Soil Name	Rating
PND	PIIHONUA SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Well drained
POD	PIIHONUA EXTREMELY STONY SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Well drained
PPC	PUAULU SILT LOAM, 0 TO 10 PERCENT SLOPES	Well drained
PRD	PUNOHU SILT LOAM, 12 TO 20 PERCENT SLOPES	Well drained
PSC	PUUKALA EXTREMELY STONY SILT LOAM, 6 TO 12 PERCENT SLOPES	Well drained
PTC	PUUKALA VERY ROCKY SILT LOAM, 6 TO 12 PERCENT SLOPES	Well drained
PUC	PUU OO SILT LOAM, 6 TO 12 PERCENT SLOPES	Well drained
PVD	PUU PA EXTREMELY STONY VERY FINE SANDY LOAM, 6 TO 20 PERCENT SLOPES	Well drained
PVF3	PUU PA EXTREMELY STONY VERY FINE SANDY LOAM, 70 TO 100 PERCENT SLOPES, SEVERELY ERODED	Well drained
PWD	PUU PA SILT LOAM, 12 TO 20 PERCENT SLOPES	Well drained
rAK	AKAKA SOILS	Well drained
rAM	AMALU SOILS	Poorly drained
rAR	AMALU-ROUGH BROKEN LAND ASSOCIATION	Poorly drained
RB	ROUGH BROKEN LAND	Well drained
rCL	CINDER LAND	Excessively drained
rHID	HUIKAU LOAMY SAND, 12 TO 20 PERCENT SLOPES	Somewhat excessively drained
rHID2	HUIKAU LOAMY SAND, 12 TO 20 PERCENT SLOPES, ERODED	Somewhat excessively drained
rHLD	HUIKAU EXTREMELY STONY LOAMY SAND, 12 TO 20 PERCENT SLOPES	Somewhat excessively drained
rHP	HYDRANDEPT-TROPOFOLIST ASSOCIATION	Well drained
rKAD	KAHALUU EXTREMELY ROCKY MUCK, 6 TO 20 PERCENT SLOPES	Well drained
rKED	KAIMU EXTREMELY STONY PEAT, 7 TO 25 PERCENT SLOPES	Well drained
rKFD	KEAUKAHA EXTREMELY ROCKY MUCK, 6 TO 20 PERCENT SLOPES	Well drained
rKGD	KEEI EXTREMELY ROCKY MUCK, 6 TO 20 PERCENT SLOPES	Well drained
rKHD	KEKAKE EXTREMELY ROCKY MUCK, 6 TO 20 PERCENT SLOPES	Well drained
rKUC	KILAUEA EXTREMELY GRAVELLY SAND, 6 TO 12 PERCENT SLOPES	Somewhat excessively drained
rKXD	KILOA EXTREMELY STONY MUCK, 6 TO 20 PERCENT SLOPES	Well drained
rKYD	KONA EXTREMELY ROCKY MUCK, 6 TO 20 PERCENT SLOPES	Well drained
rLLD	LALAAU EXTREMELY STONY MUCK, 6 TO 20 PERCENT SLOPES	Well drained
rLV	LAVA FLOWS, AA	Excessively drained
rLW	LAVA FLOWS, PAHOEHOE	Excessively drained
rMAD	MALAMA EXTREMELY STONY MUCK, 3 TO 15 PERCENT SLOPES	Well drained
rMUB	MANU SILT LOAM, 2 TO 6 PERCENT SLOPES	Well drained
rMWD	MAWAE EXTREMELY STONY MUCK, 6 TO 20 PERCENT SLOPES	Well drained
rOPE	OPIHIKAO EXTREMELY ROCKY MUCK, 3 TO 25 PERCENT SLOPES	Well drained
rPAE	PAPAI EXTREMELY STONY MUCK, 3 TO 25 PERCENT SLOPES	Well drained
rPHB	PUHIMAU SILT LOAM, 2 TO 6 PERCENT SLOPES	Well drained
rPXE	PUNA EXTREMELY STONY MUCK, 3 TO 25 PERCENT SLOPES	Well drained
rPYD	PUNALUU EXTREMELY ROCKY PEAT, 6 TO 20 PERCENT SLOPES	Well drained
rRO	ROCK LAND	Well drained
rVS	VERY STONY LAND	Well drained

Map Symbol	Soil Name	Rating
Tr	TROPAQUEPTS	Poorly drained
UMD	UMIKOA SILT LOAM, 12 TO 20 PERCENT SLOPES	Well drained
USD	UMIKOA EXTREMELY STONY SILT LOAM, 12 TO 20 PERCENT SLOPES	Well drained
WAC	WAIHAHA SILT LOAM, 0 TO 10 PERCENT SLOPES	Well drained
WAD	WAIHAHA SILT LOAM, 10 TO 20 PERCENT SLOPES	Well drained
WHC	WAIHAHA EXTREMELY STONY SILT LOAM, 6 TO 12 PERCENT SLOPES	Well drained
WKD	WAIHAHA VERY ROCKY SILT LOAM, 10 TO 20 PERCENT SLOPES	Well drained
WLC	WAIKALOA VERY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES	Well drained
WMC	WAIMEA VERY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES	Well drained
WSD	WAIMEA EXTREMELY STONY VERY FINE SANDY LOAM, 12 TO 20 PERCENT SLOPES	Well drained